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ABSTRACT

This bibliography complements an earlier "Bibliography for Geographic Education," ED 092 435. The purpose of the bibliography is to provide a guide to the essential philosophical and methodologic literature in English treating the discipline of geography between 1950 and 1974. A useful reference for educators, students, curriculum developers, and professional geographers, the bibliography begins with an introduction in which the compiler gives a succinct overview of recent trends in geography. The bibliography cites books and articles separately, which are further categorized into nine sections: (1) Bibliographical; (2) Geography and Other Disciplines; (3) Geography in Various Countries; (4) Methodology in Geography; (5) Philosophy of Geography; (6) Professional Training; (7) Quantitative Geography; (8) Subdisciplines of Geography; and (9) Theoretical Approaches. The arrangement with the categories is alphabetical by author. An addendum of recent books not found in the earlier edition concludes the document. (Author/JR)

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BIBLIOGRAPHY ON GEOGRAPHIC THOUGHT, PHILOSOPHY, AND METHODOLOGY, 1950-1974

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FOREWORD

This "Bibliography on Geographic Thought, Philosophy, and Methodology, 1950-1974" will provide the geographic educator as well as the professional geographer with a useful bibliographic refererce. Students in geography will also find this publication particularly helpful in identifying the most recent pertinent literature on geographic thought. The bibliography begins with an "Introduction" in which the compiler gives a succinct overview of recent trends in geographic thought, philosophy, and methodology.

Issues in geographic thought and methodology are not only pertinent to the professional geographer, but are also of concern to the curriculum developer. An example is found in the work of the Geography Curriculum Project, in which a review of the theory of geographical organization led the Project to use a systematic approach to develop geographic units to supplement the dominant area approach found in school texts. Discussion of the nature of geography and its proper focus thus not only illuminates the process of knowledge generation in geography as a research discipline, but also the organization of the knowledge for transmission to elementary learners.

Professor Wheeler's "Bibliography on Geographic Thought" complements an earlier "Bibliography for Geographic Education," Publication No. 2, revised in April 1969. Suggestions or comments concerning the "Bibliography on Geographic Thought" may be addressed to the Project or directly to Dr. James O. Wheeler, Department of Geography, University of Georgia, Athens, Georgia, 30602.

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INTRODUCTION

The philosophy of geography, the methodology, and the perspective on geographic thought have undergone remarkable change during the past twenty-five years. While most geographers have been busily writing their geography, experimenting with new ways to look at old problems, and learning new techniques to test geographic concepts and theories, a small but significant number of geographers have been especially concerned with the implications of what geographers were doing, how they were doing it, why they were doing it, and where the field of geography was moving into the future. The contribution of those concerned with the philosophy and methodology of geography has been fundamental both in reporting and commenting on developing trends and in suggesting promising and untrodden paths for geographic pursuit.

The purpose of this bibliography and this brief introduction is to provide a guide to the essential philosophic and methodologic literature in English treating the discipline of geography. Although merely knowing about the field's philosophic outlook and methodologic stance does not make one a geographer, a purely substantive understanding of geography divorced of its philosophy and methodology makes one even less so. To study one without the other is to be able to run on only one leg at a time. And as Goethe said, "All fact is, in itself, theory." Thus whereas it may be possible to separate philosophy and methodology artificially from the field's substantive findings, concepts, and principles, there is an essential unity between what one holds as his philosophy and what he finds as a result of his methodologic investigations. Many researchers in geography may profess little relish for abstract and protracted philosophic discussions; yet in their work-a-day world they will, if carefully examined, make numerous and profound assumptions--based on nothing if not their philosophy--which impinge

directly and unequivocally upon their results, findings, and substantive conclusions.

In 1950, unquestionably the predominant view of the field of geography in the United States had best been summarized and articulated by Richard Hartshorne in his 1939 classic, The Nature of Geography. This wide-ranging treatment of the discipline continued to be the philosophic bible of the majority of American geographers through the 1950's and perhaps even into the 1960's. Hartshorne traced the history of geographic thought and demonstrated the origin and evolution of many philosophic and methodologic viewpoints commonly held by geographers. It was masterful scholarship and served as a stable cornerstone around which numerous geographic careers were built.

Hartshorne spoke of disciplines as tending to be ideographically or nomothetically oriented. The physical sciences, he observed, are strongly nomothetic. By contrast, geography, like history, is especially concerned with the particularistic. After all, there are no two places on earth exactly identical. How then could a geographer ever hope to discover laws, develop theories, and examine general principles? Most disciplines are defined by the objects they investigate, Hartshorne noted, going as far back as Kant to cite support. However, history integrates data in time, and geography integrates data in space. Geography studies areal differences and is heavily ideographic and therefore different from most disciplines in its search for knowledge. To quote Hartshorne, "no universals need be evolved, other than the general law of geography that all its areas are unique" (p. 468).

With the assurance from the foremost spokesman in the field that geography was exceptional, the discipline drew ever more inward looking and isolated from other disciplines. Methodologically, geography indeed became

exceptional, for example, in that the mathematical and statistical techniques so widely used in the physical and biological sciences, as well as in the social and behavioral sciences, were ignored almost completely by those following the Hartshornian perspective. In the early 1950's, and even later, geography was by and large proudly non-quantitative and anti-theoretical.

Only a very small number of geographers took issue with Hartshorne's traditional view of the field. Edward Ullman in the early 1950's argued that areal differentiation should be a subconcept of spatial interaction and emphasized general relationships among places based on the nature of interaction among them. As an aside, it is interesting to note that Ullman in the early 1940's wrote an article introducing one of the most important geographic theories (central place theory) to an American audience, but he published it in a sociology, not a geography, journal.

It remained for Fred Schaefer at the University of Iowa to launch in 1953 the most frontal attack on the Hartshornian philosophy of geography. Schaefer, trained in Germany, had not grown up in the mold of most American geographers. His only significant published work was one, but it became a rallying point for a whole new and different generation of American geographers. Published in the Annals, Association of American Geographers, just after his untimely death, his article attacked the uniqueness doctrine of geography. Geography, he argued, was not exceptional among academic disciplines. Rather than considering empirical regional geography as the core of the field, Schaefer thought regional geography must become the laboratory side of an essentially theoretical subject. "Science is not so much interested in individual facts as in the patterns they exhibit" (p. 227). In geography, these patterns are those dealing with spatial relations. "Geography . . . must pay attention to the spatial arrangements

of the phenomena in an area and not so much to the phenomena themselves" (p. 228). When searching for uniqueness among places on the earth, one will invariably find uniqueness, but not scientific understanding. Only in searching for scientific regularity can one determine what is "unique" and what is general, for clearly what is unique is unique only in relation to what is general. As for geography being methodologically exceptional, Schaefer replies:

> The main difficulty of the uniqueness argument is that . . . it proved too much. Are there really two stones completely alike in all minute details of shape, color and chemical composition? Yet, Galileo's law of falling bodies holds equally for both. Similarly . . . it seems safe to say that no two people would register identical scores on all tests as yet devised. Does it follow that our psychologists have so far discovered not a single law? (p. 238).

Hartshorne never quite recovered from this vigorous and unexpected attack by an obscure German immigrant who, according to William Bunge, wrote "scarcely any" on a university form after the entry "achievements." To compound the insult to Hartshorne, Schaefer had not followed rigorously the precise rules of footnoting, paraphrasing, and quoting---leading Hartshorne first to reply to Schaefer's article merely as a case of sloppy scholarship and secondly to attempt to answer Schaefer's philosophic position. The former proved easier than the latter. The philosophic reply started as an article and several years later emerged as a monograph revealing Hartshorne's changed perspective on geography over the past twenty years. With the increasing emphasis in geography on theory and spatial regularity as opposed to uniqueness, Hartshorne came to substitute the term "areal variation" for "areal differentiation" in his 1959 Perspective on the Nature of Geography. But Hartshorne's perspective has proven to be more focused on the past than toward the future.

Even before 1959, William Garrison and his students at the University of

Washington--and later Northwestern University--had launched the dual revolutions in geography, known as the Theoretical Revolution and the Quantitative Revolution. Geography changed quickly, though not without great strains and stresses, so that by 1963 Ian Burton was able to declare that the quantitative revolution, at least, was over. This was only ten years after Schaefer's article. Acceptance of a theoretical posture by geographers has perhaps been slower, and, as Berry has pointed out, there has been much confusion between fact, theory, and method. As a result of Garrison and the scientific-theoretical-quantitative thrust, geography moved back into the mainstream of the social and natural sciences and took on an outward-looking view toward other disciplines. As a consequence, geography has increasingly become intellectually more prominent over the last several years.

In 1958, Edward A. Ackerman presented a brief but profound discussion entitled Geography as a Fundamental Research Discipline. Without directly attacking Hartshorne, Ackerman nevertheless treated geography in a fundamentally different way than Hartshorne. Ackerman placed the scientific approach at the forefront and suggested increased attention should be given to abstract or theoretical geography; to the greater use of quantification; to the integration of physical, biotic, and cultural areas of geography; and to the concern with spatial processes ("space-adjusting techniques"). While taking something of a middle-road between the traditional Hartshornian methodology and the arguments of Schaefer, Ackerman laid a comfortable philosophic foundation for many geographers during a period of rapid transition.

In August of 1963 a former student of Garrison, Brian Berry, stepped before the annual meeting of the Association of American Geographers in Denver

in a session supposedly devoted to the regional geography of the United States. In his presentation, published in the 1964 issue of the Annals, Association of American Geographers, entitled "Approaches to Regional Analysis: A Synthesis," Berry placed the discussion of geographic methodology within the context of systems theory and indeed synthesized the varied approaches used by geographers into a simplified matrix. Columns represented places on the earth and rows defined characteristics of places. The emphasis one gave in his analysis to the columns (localized associations of data or Hartshorne's "integration of data in place") or to the rows (systematic, spatial analysis) determined, in traditional language, whether the study would be described, respectively, as regional (areal differentiation) or systematic geography. Berry went on to point out that "geographers are, like other scientists, identified not so much by the phenomena they study, as by the integrating concepts and processes they stress" (p. 2). This view was counter to Hartshorne's, and by the early 1960's the czar of methodology in geography had indeed begun to topple.

Berry continued:

> The geographic point of view is spatial and . . . the integrating concepts and processes of the geographer relate to spatial arrangements and distributions, to spatial integration, to spatial interactions and organization, and to spatial processes. Geography's integrating concepts and processes concern the worldwide ecosystems of which man is the dominant part (pp. 2-3).

What is the difference between regional and systematic geography? According to Berry (p. 9):

> If the object of systematic geography is to find those fundamental patterns and associations characterizing a limited range of functionally interrelated variables over a wide range of places, the object of regional geography is to find the essential characteristic of a particular region--its regional character based upon the localized associations of variables in place--by examining a wide range of variables over a limited number of places.

Berry was thus able to translate traditional geography into the language of modern scienfific research methodology.

The scientific orientation and the theoretical-deductive approaches to geography were given an added boost by the publication in 1965 of The Science of Geography, based on the work of a seven man panel, chaired by Edward A. Ackerman. Summarizing the changes in geography, the report noted (p. 12):

> Like some other fields of science, geography until the 1940's did not have balance between the empirical-inductive and the theoretical-deductive approaches, but leaned heavily toward the former. In some degree the imprint of this former predilection is still with the profession. Since the 1940's, however, interest in the theoretical-deductive approach has gained rapidly, as the potentialities of applying topology, geometry, and advanced statistical techniques to geographical problems were comprehended. Interest in the theoretical-deductive is quickening as recognition of the applicability of formal systems analysis spreads, for all geography is concerned with the spatial attributes of systems. The systems concept, indeed, has opened the way toward a flexibility in research that is freeing the field from a past view of the world as a mosaic of regions.

Another panel-written report, edited by Edward J. Taaffe and entitled Geography, appeared in 1970. Again the emphasis was on scientific methodology, quantitative tools, and locational analysis. Geography was viewed "as the study of spatial organization expressed as patterns and processes" (pp. 5-6). Although geography was treated primarily as a social science in the report, the important physical science attributes of the field were also recognized.

> Geographic study of the spatial organization of any area necessarily considers man-environment relationships and cultural landscapes. Such study is clearly integrative, and areas may be viewed as complexes of interrelated distributional patterns, lines of movement, and spatial processes, all involving change through time. Recent research emphases in geography also include the use of mathematical and statistical models in describing, analyzing, and understanding varied spatial patterns and processes; and an increasing concern with behavior in space, growing out of studies of the cultural perception and ecological interpretation of environment.

One cannot leave even this brief discussion of recent geographic thought without mentioning David Harvey's Explanation in Geography, published in 1969. The book is "a systematic investigation of the quantitative revolution and its [philosophical and methodological] implications" (preface). Harvey "sought to bring together the positive aspects of traditional geographical thought and the philosophy implied by quantification," the latter leading us "to think theoretically and analytically . . ." (preface). He continued (preface):

> There seemed to me to be nothing wrong with the aims and objectives of traditional geography . . ., but as an academic enterprise it had managed somehow or other to hedge itself about with so many inhibiting taboos and restrictions that it could not hope to realise the aims and objectives it had set itself. In particular, geographers were failing, by and large, to take advantage of the fantastic power of the scientific method. And it was the philosophy of the scientific which was implicit in quantification.

One of Harvey's basic arguments and assumptions, although debated by Stephen Gale in his review of the book in Geographical Analysis, is that "the adoption of a methodological position does not entail the adoption of a corresponding philosophical position" (p. 7). All in all, Harvey moved geography still closer to the scientific-analytic method, as he spoke of models, systems analysis, quantitative techniques, probability theory, and the role of theory in explanation in geography.

Edward J. Taaffe's presidential address, "The Spatial View in Context," published in the Annals of the Association of American Geographers, 1974, is one of the most useful articles in placing geographic philosophy into a meaningful perspective. Drawing upon Pattison's four traditions of geography, Taaffe traced the evolution of the man-land, the area study, and the spatial organization schools. Pattison's fourth tradition, geography as earth science, is viewed by Taaffe as "subsumed in the other three traditions." Taaffe recognized geography

as spatial organization as the dominant view in the field. The spatial view, traceable to the German geographer Ratzel, was also attributed to some of the work of Robert Platt in the 1920's. It remained for Schaefer, Garrison, Berry, and many others to bring the spatial organization view into prominence. Bunge's Theoretical Geography placed great emphasis upon the geometric approach to geographical analysis, and Peter Haggett provided an excellent synthesis of the rather considerable research completed by the mid-1960's from the spatial point of view. Taaffe saw the area study tradition as drawing inspiration from Hartshorne, while the man-land perspective was traceable to the "California School" of geography, specifically Sauer, and more recently the research of Gilbert White, Robert Kates, and Ian Burton. In summary, Taaffe wrote:

> The current U.S. emphasis on geography as spatial organization has evolved over the last fifty years from an early emphasis on man-land relations followed by an emphasis on areal differentiation. The spatial view has shown both strengths and weaknesses during the sixties. It has led to more cumulative generalizations and increased cooperation with other social sciences, but has also been felt by some to have been associated with an overemphasis on sterile geometrics and an apparent neglect of pressing social questions. For the seventies it is hoped that geographic research can maintain a reasonable balance between activism and scientism by stressing those emerging generalizations which promise to have the greatest ultimate impact upon society. The spatial view should be more closely articulated to a revitalized man-land view and to the complementary but relatively neglected area study view.

In conclusion, the literature dealing with the philosophy and methodology of geography is extensive. Many different perspectives emerge as different geographers peruse that literature. This brief overview has attempted to provide one perspective by highlighting the contributions of a few of the major writings since 1950. Very assuredly, the trend during this period has been in favor of the spatial school, with its emphasis on the scientific approach, on quantitative methods,

and on theoretical and conceptual views. With the concern of geography in recent years to provide solutions to social and environmental problems, for example, the spatial organization school has proven the most prepared to make contributions in this direction. Thus the solutions to specific societal problems are best achieved from a base of concepts and theories.

The rather fundamental changes that have occurred in geography in the last generation have a direct impact on how geography is taught at all levels of instruction, from graduate schools to elementary classrooms. During the era of the traditional Hartshornian philosophy with the emphasis placed on "areal differentiation" (1939), and later modified to the more neutral "areal variation" (1959), all too typically the student was expected to memorize long lists of place names. Knowing capitals, highest mountains, longest rivers, or principal products became the primary focus of what was thought to be "geography," a perspective stemming from the view that geographers concerned themselves with unique, peculiar, or exceptional information about places. The regional approach consisted essentially of an inventory or encyclopedic listing of "facts" without an attempt to integrate and associate these facts.

With the infusion of the scientific-analytic methods in modern geography, the geographic educator has now a tremendous and exciting opportunity to treat geography systematically by examining spatial principles and concepts. This modern approach permits the student to gain a better understanding of spatial relationships among places, his own perceptions of places, and even his own behavior in space. Thus, the implications of the changed geographic philosophy are profound for the geographic educator.

The bibliography that follows represents a large and varied group of articles and books. It is hoped that these will be of continuing interest

to geographers and that this form will make them better known and more accessible. No claim for completeness is made, as what qualifies for inclusions in such a subject area may be debated. However, it has been the intention to cite the essential literature. Omissions or corrections should be called to my attention.

The bibliography is divided into several categories. The two most general are books and articles. No attempt has been made to classify the former by subject or content. However, as a service to the user the articles have been placed into nine categories, with several articles grouped into two or more of these nine divisions.

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